

Guest Presentation

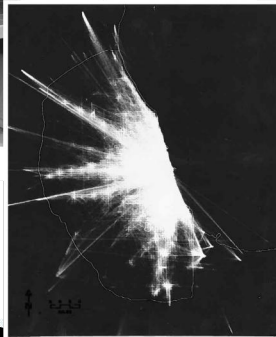
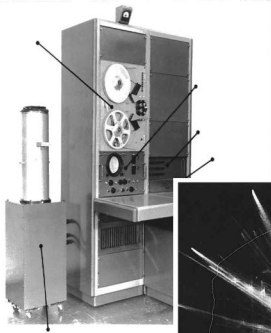
FHWA – TMIP
Model Estimation Webinar Session 9
Kermit Wies, CMAP
July 16, 2009



CMAP's Research and Analysis Work Program

Legacy – Vision – Goals

CMAP's R&A Work Program: 50 Year Modeling Legacies



- CATS formed in 1955
- Pioneer in data collection and the 4-step model
- Large household survey
- Early computer application
- In 1962: a 3-volume transportation plan for 1980
- Subsequent transportation plans for 2000, 2010, 2020 and 2030

CMAP's R&A Work Program: Strategic Vision

authoritative source
for regional data:

- Collection
- Exchange
- Dissemination
- Analysis
- Evaluation and
- Modeling



CMAP's R&A Work Program: Goals for a new modeling framework

- Respond to changing policy priorities
- Assess adequacy of existing models
- Attend to needed improvements



Goals for a new modeling framework: Changing policy priorities

- Managing growth and land development
- Environmental stewardship
- Transportation choices
- Economic development



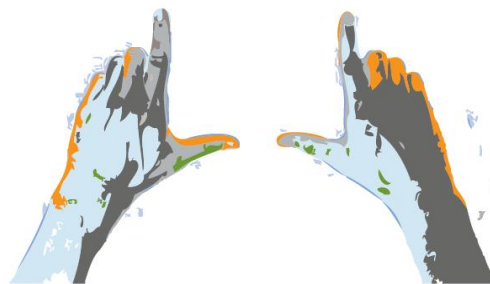
Goals for a new modeling framework: adequacy of existing models

- ▶ Strategy and scenario responsiveness
- ▶ Robust representation of behavior and choice

<i>Data Task</i>	<i>Primary Challenge</i>
<i>Collection</i>	<i>Frequency</i>
<i>Exchange</i>	<i>Cooperation</i>
<i>Dissemination</i>	<i>Visualization</i>
<i>Analysis</i>	<i>Competency</i>
<i>Evaluation</i>	<i>Comprehensiveness</i>
<i>Modeling</i>	<i>Robustness</i>

Goals for a new modeling framework: needed improvements

- ▶ Population synthesis
- ▶ Activity-based demand estimation
- ▶ Network microsimulation
- ▶ Land use prediction and feedback



Population Synthesis

- ▶ Turn planning strategies into modeling components :
 - Households into demographic elements
 - Jobs into employment sectors
 - Forecast and scenario context

Activity-based demand estimation

- Travel Inventory
- Symposium
- Cadre
- Strategic Plan

Network Microsimulation

► TRANSIMS development needs:

Activity based demand interface

Transit, freight, aviation operations

Emergency and incident capabilities



Land Use Prediction and Feedback

► Access product

Composite Utility of Transportation Performance

Land Value Index



CMAP's challenges

- ▶ Evolution of the MPO function
- ▶ Role of data analysis and evaluation
- ▶ Creativity, flexibility and adaptability

